

Remarks

Following entry of the presently submitted amendments, claims 1, 9-10, 15-17, 19, 21, and 22-45 will be pending in the application. Claims 1-8, 11-14, 18, and 20 have been canceled. New claims 22-45 have been presented. Support for the new claims is found *inter alia* in Tables 1-4, SEQ ID NOS:625 and 627. Thus, no new matter has been introduced.

The restriction requirement (Paper No. 10) separates the claims into eight different groups. Group I is defined as claims 1-8, 14, and 18, drawn to isolated nucleic acids and host cells and recombinant vectors containing the nucleic acids, as well as methods of detecting *Borrelia* nucleic acids by hybridization. Group II is defined as claims 9, 11-12, and 20, drawn to isolated polypeptides and kits containing polypeptides. Group III is defined as claims 10 and 13, drawn to antibodies. Group IV is defined as claim 15, drawn to hybridomas. Group V is defined as claim 16, drawn to vaccines. Group VI is defined as claim 17, directed to a method of attenuating infection. Group VII is defined as claim 19, drawn to a method of detecting *Borrelia* nucleic acids through PCR. Group VIII is defined as claim 21, drawn to a method of detecting *Borrelia* antibodies. In addition to electing one of the nine groups, the Examiner requires that a single nucleic acid or amino acid sequence be elected from within the elected group, because each of the nucleic acid or amino acid sequences disclosed in the application allegedly constitutes a separate invention.

Applicant respectfully traverses the present restriction requirement. Even assuming, *arguendo*, that Groups I - VIII represented distinct or independent inventions, Applicants submit that to search and examine the subject matter of all the groups together, at least for a single nucleic acid or amino acid sequence, would not be a serious burden on the Examiner. Applicant points out that even where patentably distinct inventions appear in a single application, restriction remains improper unless the examiner can show that the search and examination of these groups would entail a "serious burden". *See* M.P.E.P. § 803. In the present situation, no such showing has been made. Although the Examiner has argued that Groups I-VIII are separately classified, Applicant nonetheless submits that a search of the claims of Group I would also provide useful information for the claims of the other groups. For example, in many if not most publications disclosing a polynucleotide, the authors also routinely include polypeptides encoded thereby and methods for making the same. Since these searches commonly overlap, Applicant respectfully asserts that the concurrent search and examination of Groups I-VIII would not entail a serious burden.

Accordingly, in view of M.P.E.P. § 803, the claims of Groups I-VIII should be searched and examined in the present application. Applicant therefore respectfully requests

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that the restriction requirement under 35 U.S.C. § 121 be reconsidered and withdrawn, and that the instant claims be examined in one application. Applicant retains the right to petition from the restriction requirement under 37 C.F.R. § 1.144.

To comply with the pending election requirement, Applicant herein provisionally elects, *with traverse*, the claims currently restricted to Group I and the nucleic acid sequence of f21-4 as shown in SEQ ID NO:625, encoding the amino acid sequence as shown in SEQ ID NO:627. Original claims 1-8, 14, and 18 have been canceled; however, new claims 22-45 represent embodiments of Group I which are directed to SEQ ID NO:625 or portions thereof, vectors and host cells containing such polynucleotides, and methods of detecting *Borrelia* nucleic acids via hybridization.

Applicants retain the right to petition from the restriction requirement under 37 C.F.R. § 1.144.

Sequence Rules

Paper No. 10 states at page 5 that the application does not comply with the sequence rules because "[a]ll the nucleic acid or amino acid sequences are required to have identification number, for example in claim 1 and in table 1." It is respectfully submitted that Table 1, as amended in Applicants' filing of September 27, 2001, contains sequence identifiers for each entry in the table. Copies of the first two pages of Applicants Amendment of September 27, 2001, as well as the entire Version With Markings To Show Changes Made (181 pages) filed therewith, are attached for the Examiner's convenience.

Claim 1 has been canceled, thereby obviating the objection with respect to claim 1. Newly submitted claims 22-45 recite the appropriate sequence identifiers.

Thus, Applicants believe that the sequence rules have been fully complied with. Withdrawal of this objection is respectfully requested.

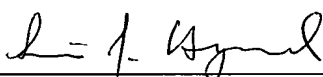
Conclusion

Applicants respectfully request that the above-made remarks be entered and made of record in the file history of the instant application. The Examiner is invited to call the undersigned at the phone number provided below if any further action by Applicant would expedite the examination of this application.

If there are any fees due in connection with the filing of this paper, please charge the fees to our Deposit Account No. 08-3425. If a fee is required for an extension of time under 37 C.F.R. § 1.136, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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